

5. The process of claim 1 where the composite is further characterized in that it contains a binder selected from the group consisting of hydrous zirconium oxide, zirconia, zirconium phosphate, alumina, aluminum phosphate, titania, titanium phosphate, hydrous titanium oxide, layered double hydroxides, magnesium hydroxide, calcium hydroxide, silica, basic clays and mixtures thereof.
6. The process of claim 1 where M is tin (4+).
7. The process of claim 1 where M is titanium (4+).
8. The process of claim 1 where M is niobium (5+).
9. The process of claim 1 where $n = 0$.
10. The process of claim 1 further characterized in that the A cation is exchanged for a different secondary cation, A', selected from the group consisting of alkali metals, alkaline earth metal, hydronium ions and mixtures thereof.
11. The process of claim ¹⁰~~11~~ where A' is a mixture of sodium and calcium ions.
12. The process of claim 11 where A' is a mixture of sodium, calcium and hydronium ions.
13. The process of claim 1 where the cation exchange composition has the structure of UZSi-9, UZSi-11 or UZSi-1.